



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,312	07/23/2003	Vishnu A. Patankar	MS1-1611US	8391
22801	7590	05/14/2008		
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			EXAMINER GELAGAY, SHEWAYE	
			ART UNIT	PAPER NUMBER
			2137	
			MAIL DATE	DELIVERY MODE
			05/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/625,312	Applicant(s) PATANKAR ET AL.	
	Examiner SHEWAYE GELAGAY	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-11,16,18-20,26-29 and 35-43 is/are pending in the application.
- 4a) Of the above claim(s) 4,12-15,17,21-25 and 30-34 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 and 18-20 is/are allowed.
- 6) ☒ Claim(s) 1-3,8-11,26-29,35-42 and 44 is/are rejected.
- 7) ☒ Claim(s) 5-7 and 43 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/1/08 has been entered.

2. Claims 1, 5, 8, 16, 18-19, 26, 28, 35, 41 have been amended. Claims 4 and 17 have been cancelled. New claim 44 has been added. Claims 12-15, 21-25 and 30-34 have been withdrawn. Claims 1-3, 5-11, 16, 18-20, 26-29 and 35-44 are pending.

Response to Arguments

3. Applicant's arguments filed 2/1/08 with respect to the claims 1, 26, 35 and 41 have been fully considered but they are not persuasive. Applicant's arguments with respect to claim 3 have been considered but are moot in view of new grounds of rejection.

4. In response to the applicants arguments the following comments are made:

The applicant argued that Jones discloses creating a hash value by "applying a hash function to the method string name and the parameter type list."...Jones nevertheless discloses the creation by applying a hash to a single "method string name" and "a parameter type list" rather than creating a signature based on "a plurality of function names." The Examiner respectfully disagrees. The Examiner would like to point out Jones teaches when a client wishes to invoke a method of a remote object located

on a server, the client sends the hash value identifying the particular remote method to the server over the RMI connection. This hash value is created by applying a hash function to the method string name and the parameter type list. Suppose a remote object is created containing the following methods: Public interface Directory {Address lookupAddress (string name); Address lookupAddress(Person person)} The Java runtime system on server creates a hash for each remote method. Each hash value is added with a pointer to its corresponding method to mapping table thus creating a method and hash value pairing in mapping table. Server can later access mapping table using hash value from client to identify remote method to be invoked. Therefore, Jones teaches generating a signature based on "a plurality of function names."

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 8-11, 20, 26-28 and 35-42 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garst et al. (hereinafter Garst) US Patent Number 6,188,995 in view of Jones et al. (hereinafter) Jones U.S. Patent Number 6,629,154 and in view of Shaughnessy U.S. Patent 6,026,235.

As per claim 1:

Garst teaches a method for managing access to resources, comprising: generating a list of resource signatures; (col. 5, line 67-col. 6, line 2) accessing the list of resource signatures, each of the resource signatures configured with accessibility status, wherein the accessibility status includes one of loadable and restricted; (col. 5, line 67-col. 6, line 2) generating a verification signature for a requested resource; (col. 6, lines 3-15) comparing the verification signature for the requested resource to the list of resource signatures; (col. 6, lines 3-15) executing the requested resource if the resource signature matches the verification signature and the accessibility status is loadable; and preventing the requested resource from execution if the resource signature matches the verification signature and the accessibility status is restricted. (col. 6, lines 15-20) In addition, Garst further teaches license string specifies the names of the program licensed. (col. 5, lines 15-20) Garst does not explicitly teach a signature being generated at least on function names included in an import table of a corresponding resource. Jones in analogues art, however, teaches a signature being generated at least on function names included in a corresponding resource. (col. 5, lines 35-67; col. 11, lines 15-35) Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by

Art Unit: 2137

Garst with Jones in order to uniquely identify a method to invoke using a hash value computed. (Abstract; Jones) Both references do not explicitly disclose an import table. Shaughnessy in analogous art, however teaches an import table. Therefore it would have been obvious to one ordinary skill in the art to modify the method disclosed by Garst and Jones with Shaughnessy in order to determine the names and address of all functions in an application. (col. 4, lines 16-17; Shaghnessy)

As per claims 2 and 40:

The combination of Garst, Jones and Shaghnessy teaches all the subject matter as discussed above. In addition, Garst further teaches wherein the resources include applications or programs. (col. 2, lines 56-67)

As per claims 3, 27 and 43:

The combination of Garst, Jones and Shaghnessy teaches all the subject matter as discussed above. In addition, Garst further teaches each of the resource signatures and a verification signature is generated for enforcing software license that includes a dynamic link library. (col. 5, lines 1-65) In addition, Jones further teaches wherein the signature is generated based on one or more by applying a hash function to the method string names. (col. 5, lines 1-65) None of the references explicitly teach a resource signature is generated based further on one or more dynamic link library (DLL). It would have been obvious to one ordinary skill in the art to apply the technique of generating a signature based on one or more method names as taught by Jones, to manage access to resources by generating and verifying signature that includes a dynamic link library to improve the system of Garst for enforcing software license.

As per claim 8:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. Claim 8 does not further limit claim 1, therefore, is rejected on the same basis as claim 1. (see 112 rejection above)

As per claim 9

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. Claim 9 does not further limit claim 1, therefore, is rejected on the same basis as claim 1. (see 112 rejection above)

As per claim 28 and 36-37:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst teaches retrieving data from an executable of the requested application; and hashing organized information. (col. 5, lines 1-65) In addition, Shaughnessy further teaches sorting the retrieved data; and organizing the sorted information in a predetermined manner. (col. 4, lines 14-28)

As per claim 10:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst further teaches wherein a same procedure is followed to generate each of the resource signatures and to generate a verification signature. (col. 5, lines 36-38)

As per claim 11:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst further teaches coding the generated list

of resources signatures into a dynamic link library (DLL) (col. 15, lines 35-54)

As per claims 26, 35 and 41

Garst teaches a method of restricting particular applications, comprising: receiving a list of application fingerprints corresponding respectively to restricted applications; (col. 5, line 67-col. 6, line 2) receiving a request to execute an application; (col. 5, line 67-col. 6, line 2) generating a confirmation fingerprint for the requested application; (col. 6, lines 3-15) comparing the confirmation fingerprint to the list of application fingerprints; (col. 6, lines 3-15) and restricting the requested application if the confirmation fingerprint matches one of the application fingerprints respectively corresponding to restricted applications. (col. 6, lines 15-20) Garst in analogous art, however, discloses wherein the confirmation fingerprint is generated at least from function names included in an import table of the requested application. In addition, Garst further teaches license string specifies the names of the program licensed. (col. 5, lines 15-20) Garst does not explicitly teach a signature being generated at least on function names included in an import table of a corresponding resource. Jones in analogues art, however, teaches a signature being generated at least on function names included in a corresponding resource. (col. 5, lines 35-67; col. 11, lines 15-35) Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the method disclosed by Garst with Jones in order to uniquely identify a method to invoke using a hash value computed. (Abstract; Jones) Both references do not explicitly disclose an import table. Shaughnessy in analogous art, however, teaches an import table. Therefore it would have been obvious to one

Art Unit: 2137

ordinary skill in the art to modify the method disclosed by Garst and Jones with Shaughnessy in order to determine the names and address of all functions in an application. (col. 4, lines 16-17; Shaghnessy)

As per claim 20:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst teaches a method wherein the restricted applications are not licensed. (col. 6, lines 23-39)

As per claim 38:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst further teaches wherein the API is included in an operating system. (col. 6, lines 47-66; col. 7, line 39-col. 8, line 65)

As per claim 39:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst further teaches wherein the operating system runs on a web server. (col. 15, line 55- col, 16, line 13)

As per claim 42:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition, Garst further teaches downloading an updated list of the classified digital signatures to the operating system. (col. 11, lines 26-50; col. 15, line 55- col, 16, line 13)

3. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over as being anticipated by Garst et al. (hereinafter Garst) Jones et al. (hereinafter) Jones U.S.

Patent Number 6,629,154 and in view of Shaughnessy US Patent 6,026,235 and further in view of Atkinson et al. (hereinafter Atkinson) US Patent Number 5,892,904.

As per claim 29:

The combination of Garst, Jones and Shaughnessy teaches all the subject matter as discussed above. In addition Jones further teaches wherein hashing the organized named include performing a digest hash and a Secure Hash Algorithm (SHA)¹. (col. 9, lines 27-53) None of the references explicitly disclose wherein the instruction to hash further includes and instruction to execute an MD5 hashing algorithm. Atkinson in analogous art, however, discloses wherein the instruction to hash further includes and instruction to execute an MD5 hashing algorithm. (col. 20, lines 1-10) Therefore it would have been obvious to one ordinary skill in the art to modify the method disclosed by Garst, Jones and Shaughnessy with Atkinson in order to provide a preferential hash algorithm. (col. 20, line 2; Atkinson)

Allowable Subject Matter

4. Claim 16 and 18-20 are allowed.
5. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art either taken singularly or in combination teach “wherein generating the verification signature for the requested resource includes: retrieving a

plurality of names from the import table, wherein the plurality of names at least include function name; storing the retrieved names; concatenating the sorted names and executing a cryptographic manipulation of the concatenated names.”

7. Claims 6-7 and 43 that are directly or indirectly dependent on claim 5 are also objected too.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SHEWAYE GELAGAY whose telephone number is (571)272-4219. The examiner can normally be reached on 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on 571-272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/625,312
Art Unit: 2137

Page 11

/S. G./
Examiner, Art Unit 2137

/Emmanuel L. Moise/
Supervisory Patent Examiner, Art Unit 2137